County of San Diego
Health and Human Services Agency
Emergency Medical Services

Summary of Changes
BLS/ALS Adult and Pediatric Treatment Protocols effective July 1, 2018

Standing Orders/Medication List/Drug Chart Inventory	
Protocol	**Details**
S-100 Introduction	Added: New #3 "EMT skill which took effect July 1, 2017 (includes finger stick blood glucose testing, naloxone, epinephrine auto-injector) may only be performed when on- duty with a provider that is part of the organized EMS system and in the prehospital setting and/or during interfacility transport." Added: New #4 "As per Title 22, Chapter 1.5, Section 100019, public safety personnel may administer naloxone when authorized by the County of San Diego EMS Medical Director."
S-101 Glossary of Terms	Added: Brief Resolved Unexplained Event (BRUE)
• American Academy of Pediatrics clinical practice guideline replaces the term ALTE with the term BRUE (Brief Resolved Unexplained Event. The term BRUE is intended to better reflect the transient nature and lack of clear cause and removes the "life-threatening" label	
S-102 List of Abbreviations	Added: ePCR: Electronic Patient Care Records Added: ✱ Public safety personnel may administer when authorized by the County of San Diego EMS Medical Director. As per Title 22, Chapter 1.5, Section 100019
S-103 BLS/ALS Ambulance Inventory	**BLS** Optional items Added: Glucometer - required July 1, 2019 Epinephrine auto-injector adult (0.3mg)- required July 1, 2019 Epinephrine auto-injector pediatric (0.15mg)-required July 1, 2019 Naloxone intranasal- required July 1, 2019 Modified: Next to Automated external defibrillator added "required July 1, 2019" **ALS** Airways Adjuncts Deleted: ALS Airways size 2.5, 3.0, 2.5, 4.0,4.5 Vascular Access/Monitoring Equipment Added: Macrodrip (2 must be vented)

S-103 BLS/ALS Ambulance Inventory (cont)	Replaceable medications Added: Acetaminophen IV 1000 mg/ 100 ml(requires vented tubing) – Minimum requirement 2 grams "**OR**" reads "Fentanyl OR Morphine Sulfate" Morphine Sulfate 10mg/ 1 ml- Minimum requirement 20mg total (units may carry morphine or fentanyl, but not both) Fentanyl Citrate 50mcg/ 1ml- Minimum requirement 200 mcg total Added: Under IV Solutions Normal Saline 50 ml or 100 mL bag- Minimum Requirement 2 Deleted: Morphine Sulfate Oral Monitoring equipment Added: Capnography cannula- minimum 2 (moved from optional) Optional items Clarified: under Amiodarone Changed: Bougie- "required July 1, 2019"
P-110 ALS Adult Standing Orders	Adult Medications Added: Acetaminophen- For treatment of pain as needed Fentanyl- For treatment of pain as needed with systolic BP ≥100 Discomfort/pain of suspected cardiac origin where systolic BP ≥100
P-111 Adult Standing Orders for Communication Failure	S-126 Discomfort/Pain of Suspected Cardiac Origin Added: under If systolic BP <100 Initial IV Dose Morphine "up to" 0.05mg/ kg IV over 2 minutes Maximum of ANY IV dose is 10 mg Added: Under Initial IM dose Morphine "up to" 0.05 mg/ kg IM maximum for ANY IM dose is 10 mg Added: Fentanyl If < 65 years of age:3rd IN dose 50mcg IN, If ≥65 years of age: 3rd IN dose 25mcg IN Added: Special considerations: 1. Change route of administration without BHO (e.g., IV to IM or IM to IN) 2. A change in analgesic while treating a patient without BHO (e.g., changing from morphine to fentanyl) S-136 Respiratory Distress Changed: "If no definite history of asthma: Epinephrine 0.3mg 1:1000 IM, MR x2 q5 minutes" S-139 Trauma Deleted: Traumatic Arrest: Consider pronouncement at scene S-141 Pain Management Added: Under if systolic BP<100 Added: under Initial IV Dose Morphine "up to" 0.05mg/ kg IV over 2 minutes Maximum of ANY IV dose is 10 mg Added: Under Initial IM dose Morphine "up to" 0.05 mg/ kg IM maximum for ANY IM dose is

P-111 Adult Standing Orders for Communication Failure (cont)	10 mg Added: Fentanyl If <65 years of age: Titrate to pain and vital signs: Fentanyl up to 50mcg IV x1,MR 25mcg IV q5 minutes x2 , Maximum SO dose is 100mcg OR Fentanyl 50mcg IN q15 minutes x2, 3rd IN dose Fentanyl 50mcg IN If ≥65 years of age: Titrate to pain and vital signs: Fentanyl 25mcg IV x1, MR 25mcg IV q5 minutes x2, Maximum SO dose is 75mcg OR Fentanyl 25mcg IN q15 minutes x2, 3rd IN dose Fentanyl 25mcg IN Special considerations: 1. Change route of administration without BHO (e.g., IV to IM or IM to IN) 2. A change in analgesic while treating a patient without BHO (e.g., changing from morphine to fentanyl)
P-112 ALS Pediatric Standing Orders	Skills Deleted: Intubate (ET/Stomal/ETAD) When unable to adequately ventilate via BVM the unconscious apneic patient, or patient with ineffective respirations. Newborn delivery when HR remains <60 bpm after 30 seconds of ventilation with 100% O_2 Added: Amiodarone- VF/Pulseless VT after 1st shock if still refractory Fentanyl- For treatment of pain as needed with signs of adequate perfusion Lidocaine- VF/Pulseless VT after 1st shock if still refractory Changed: Morphine from "for treatment of pain as needed with systolic BP [70+(2x age in years)] to Morphine For treatment of pain as needed with signs of adequate perfusion
P-113 Pediatric Standing Orders for Communication Failure	Pain Management (S-173) Changed: Now reads "For treatment of pain as needed with signs of adequate perfusion" Added: <10 kg Fentanyl IV/IN per drug chart, MR per drug chart, ≥10 kg Fentanyl IV/IN per drug chart, MR per drug chart Added: Special Considerations: 1. Change route of administration without BHO (e.g., IV to IM or IM to IN) 2. A change in analgesic while treating a patient without BHO (e.g., changing from morphine to fentanyl) Deleted: Traumatic Arrest: Consider pronouncement at scene
P-115 ALS Medication List	Added: Acetaminophen IV –Indications: Burns, envenomation injury, trauma, pain or discomfort of suspected cardiac origin, pain associated with external pacing. Protocols: S-124, S-170, S-173, S-129, S-164, S-139, S-169, S-126, S-127, S-141, S-173 Comments: BHPO for: Chronic pain states, isolated head injury, acute onset severe headache, drug/etoh intoxication, multiple trauma with GCS<15, suspected active labor. Maximum total daily dose: 4000 mg in 24 hours Comments: Give over 15 minutes Contraindications: Severe hepatic impairment or severe active liver disease. Known hypersensitivity of allergic reaction history. If known or suspected total dose exceeding 4000 mg in a 24-hour period. Acetaminophen IV < 2 years of age Amiodarone - Indication: VF/pulseless VT after 1st shock is still refractory S-163

P-115 ALS Medication List (cont)	Epinephrine- Indication: Respiratory distress with stridor. Protocol: S-170 Fentanyl Citrate- Indications: Burns, envenomation injury, trauma, pain or discomfort of suspected cardiac origin, pain associated with external pacing. Protocols: S-124, S-170, S-173, S-129, S-164, S-139, S-169, S-126, S-127, S-141. Comments: BHPO for: Chronic pain states, isolated head injury, acute onset severe headache, drug/etoh intoxication, multiple trauma with GCS<15, suspected active labor. Lidocaine- Indications: VT with a pulse, VF/pulseless VT after 1st shock is still refractory
• Emergency Medical Services Authority (EMSA) has approved County of San Diego Local Optional Scope of Practice (LOSOP) application for the use of IV acetaminophen in pediatric patients at least 2 years of age and older.	
P-115 Addendum Pediatric weight based dosage standards	Added: Acetaminophen IV < 2 years of age contraindicated Acetaminophen IV ≥ 2 years of age 15 mg/ kg Amiodarone IV/IO 5mg/kg Fentanyl Citrate IV <10 kg 1 mcg/ kg Fentanyl Citrate IN <10 kg 1 mcg/ kg Fentanyl Citrate IV ≥10 kg 1 mcg/ kg Fentanyl Citrate IN ≥10 kg 1.5 mcg/ kg
P-117 Pediatric Drug Chart	Added: Acetaminophen IV Amiodarone IV Fentanyl IV Fentanyl IN Deleted: ETT uncuffed size ETT cuffed size ETT depth
S-104 Skills List	
External Cardiac Pacemaker	Changed: in indication from “the mA should then be increased a small amount, usually about 20%, for ongoing pacing to “the mA should then be increased a small amount, usually about 10%, for ongoing pacing”
Intubation ET/ Stomal	Deleted: in Indication “If unable to adequately ventilate via BVM the unconscious pediatric patient who is apneic or has ineffective respirations” Deleted: in indication “Newborn deliveries if HR <60 after 30 seconds of ventilation and if unable to adequately ventilate via BVM” Deleted: in comments “ET Depth Pediatrics: age in years plus 10” Deleted: in comment “Assess for right mainstem intubation” Added: under contraindication “intubation infants and pediatric patients” Changed: under comments from “ then feels it” to “assessment determines that”
• Immediate recognition of the need to ventilate a patient with prompt initiation of bag-valve-mask ventilation • Ensure that the patient is positioned appropriately, maintaining an open airway so that ventilation is	

effective (may require two people) • Use correct sized mask to ensure an effective seal is maintained • Ventilate the patient- avoid both over and under ventilation • In pediatric patients remember that respiratory failure is the most likely etiology leading to cardiac arrest. • Consider foreign body obstruction (Direct laryngoscopic visualization of the airway to remove a foreign body is authorized, including in pediatric patients (S-160)	
Intubation: Perilaryngeal airway adjunct	Changed: under comments from " then feels it" to "assessment determines that"
Spinal Motion Restriction	Added: in comments "Sports Injury Patient- if a patient is helmeted and/or shoulder padded, patient helmet and pads should be removed while on scene"
S-104A Spinal Motion Restriction Algorithm	Added: In spinal motion restriction box now reads " Sports Injury Patient- if a patient is helmeted and/or shoulder padded, patient helmet and shoulder pads should be removed while on scene" Changed: Under Acronym NSAIDS sixty five from "Age Greater" to "Greater" Changed: Under Acronym NSAIDS spine exam from "Look for point tenderness or spinal process tenderness" to "Assess entire spine for point tenderness or spinal process tenderness" Added: Under special considerations added "in position" now reads: "Patients with acute or chronic difficulty breathing: Use spinal motion restriction with caution in patients presenting with dyspnea and place patient in position best suited to protect the airway."
Adult Treatment Protocols	
S-122 Allergic Reaction/Anaphylaxis	**BLS** Changed: From "may assist patient to self medicate own prescribed EpiPen or MDI ONE TIME ONLY" to "may assist patient to self-medicate own prescribed epinephrine auto-injector or MDI ONE TIME ONLY. Base hospital contact required prior to any repeat dose." Added: If available and trained: Epinephrine auto-injector 0.3mg IM x1 **ALS** Deleted: Next to anaphylaxis "facial angioedema" Added: Under angioedema "difficulty swallowing, throat tightness, hoarse voice" Moved: Moved to the bottom as reference "Angioedema: lip/tongue/face swelling/difficulty swallowing/throat tightness, hoarse voice" Added: "then" after Epinephrine 1:1,000 0.3 mg IM per SO, MR X2 q5 minutes SO Added: "for respiratory involvement" added next to Albuterol and Atrovent Changed: Anaphylaxis criteria moved to bottom as reference Deleted: Under anaphylaxis criteria "only need hypotension to suspect" for known allergen exposure

S-122 Allergic Reaction/Anaphylaxis (cont)	Added: Note at the bottom- "EMTs not yet trained in epinephrine auto-injections may assist patient to self medicated with patient's prescribed epinephrine auto-injector"
• Epinephrine added to EMT scope of practice due to statewide push to expand availability of treatment for anaphylaxis (new in state and local scope of practice for EMTs) • Refer to S-415 Base Hospital Contact/Patient Transportation and Report Emergency Patients • "then" was added after Epinephrine dose to stress importance of giving epinephrine in anaphylaxis. Epinephrine is the drug of choice for anaphylaxis • Angioedema moved below anaphylaxis criteria as a reference that allergic reactions can manifest as angioedema. No change to current practice.	
S-123 Altered Neurologic Function (Non-Traumatic)	**BLS** Added: "Monitor blood glucose prn (if trained and available)" Added: Symptomatic suspected opioids OD (with respiratory rate <12) "Naloxone nasal spray 4mg preloaded single dose device* Administer full dose in one nostril* OR Naloxone assemble 2 mg syringe and atomizer* Administer 1mg (1 ml) into each nostril*" Added: Note "EMTs not yet trained in naloxone IN administration may assist family or friend to medicate with patient's prescribed naloxone for symptomatic suspected opioid " Added: EMTs are authorized to administer one dose of naloxone. If a patient refuses transport or if additional doses are required initiate 911 Added: Note added bottom "* Per Title 22, Chapter 1.5, Section 100019, public safety personnel may administer IN naloxone when authorized by the County of San Diego EMS Medical Director."
• Blood glucose added to EMT scope of practice (new in state and local scope of practice for EMTs) • Added obtain blood glucose if available and trained • Naloxone added to EMT scope of practice due to statewide push to expand availability of treatment for opioid overdoses. (new in state and local scope of practice for EMTs) • Added Naloxone IN by trained EMTs and if available • Effective ventilation via BVM is key during suspected opioid overdose • EMTs are authorized to administer one dose of naloxone. If a patient refuses transport or if additional doses are required initiate 911 • Refer to S-415 Base Hospital Contact/Patient Transportation and Report Emergency Patients	
S-126 Discomfort/Pain of Suspected Cardiac Origin	**ALS** Changed: From "Morphine per pain management protocol" to "Treat per pain management protocol"
S-127 Dysrhythmias	**BLS** Deleted: "VAD" now reads "TAH patients DO NOT perform compressions unless instructed otherwise by VAD or TAH coordinator or Base Hospital" **ALS** Changed: From "morphine per pain management protocol" to "treat per pain management protocol" Changed: From "for discomfort related to pacing not relieved with morphine and BP≥100"

S-127 Dysrhythmias (cont)	to "for discomfort related to pacing not relieved with analgesics and BP≥100" Changed: Under Asystole Termination of Resuscitation time changed from 30 minutes to 20 minutes. Now reads "If there is no improvement and patient is in asystole after continuous resuscitation of less than 20 minutes, base contact is necessary in order to terminate resuscitation BHPO" Changed: Under Asystole Termination of Resuscitation time changed from 30 minutes to 20 minutes. Now reads "If asystolic after 20 minutes resuscitative efforts with no improvement cease efforts SO. Document the Time of Apparent Death and the name of the paramedic"
• AHA now recommends initiation of CPR for VAD patients	
S-130 Environmental Exposure	**BLS** Changed: Under near drowning from "spinal stabilization when indicated" to "spinal motion restriction when indicated"
S-133 Obstetrical Emergencies	**BLS** Added: Under routine delivery "Clamp and cut cord between clamps following delivery (wait 60 seconds after delivery prior to clamping and cutting cord)"
• If suspected eclampsia, do not delay transport for treatment	
S-134 Poisoning/Overdose	**BLS** Added: "Symptomatic suspected opioid OD with respiratory rate <12: (use with caution in opioid dependent pain management patients)✱ Naloxone nasal spray 4mg preloaded single dose device✱ Administer full dose in one nostril OR Naloxone✱ Assemble 2 mg syringe and atomizer Administer 1mg into each nostril✱" Added: Note at bottom "EMTs not yet trained in naloxone IN administration may assist family or friend to medicate with patient's prescribed naloxone for symptomatic suspected opioid" Added: EMTs are authorized to administer one dose of naloxone. If a patient refuses transport or if additional doses are required initiate 911 Added: Note at bottom "✱ Per Title 22, Chapter 1.5, Section 100019, public safety personnel may administer IN naloxone when authorized by the County of San Diego EMS Medical Director."
• Naloxone added to EMT scope of practice due to statewide push to expand availability of treatment for opioid overdoses. (new in state and local scope of practice for EMTs) • Added Naloxone IN by trained EMTs and if available • Immediate recognition of the need to ventilate a patient with prompt initiation of bag-valve-mask ventilation • EMTs are authorized to administer one dose of naloxone. If a patient refuses transport or if additional doses are required initiate 911 • Refer to S-415 Base Hospital Contact/Patient Transportation and Report Emergency Patients	
S-136 Respiratory Distress	**ALS** Added: Under If severe respiratory distress/failure or inadequate response to albuterol/atrovent consider "If history of asthma or suspected allergic reaction"

S-136 Respiratory Distress (cont)	Changed: Under If severe respiratory distress/failure or inadequate response to albuterol/atrovent consider from "epinephrine 0.3mg 1:1000 IM SO MR x2 q10 minutes SO" to "epinephrine 0.3mg 1:1000 SO MR x2 q5 minutes SO" Added: Note at bottom "Fireline Paramedics (FEMP) without access to oxygen may use MDI delivery for albuterol in place of nebulizer"
S-141 Pain Management	**BLS** Changed: From "Elevation of extremity trauma when indicated" to "Elevation of injured extremity when indicated" **ALS** Added: Under Initial IV Dose "up to" now reads "Morphine up to 0.1 mg/kg IV over 2 minutes SO. Maximum for ANY IV dose is 10mg" Added: Fentanyl option. "If <65 years of age: Titrate to pain and vital signs: Fentanyl up to 50mcg IV x1 SO, MR 25mcg IV q5 minutes x2 SO Maximum SO dose is 100mcg OR Fentanyl 50mcg IN q 15 minutes x2 SO 3rd IN dose Fentanyl 50mcg IN BHO If >65 years of age: Titrate to pain and vital signs: Fentanyl 25mcg IV x1 SO MR 25mcg IV q 5 minutes x2 SO Maximum SO dose is 75mcg OR Fentanyl 25mcg IN q 15 minutes x2 SO 3rd IN dose Fentanyl 25mcg IN BHO Treatment of pain if BP <100 systolic BHO Added: Acetaminophen option "Acetaminophen 1000mg IV x1 SO infuse over 15 minutes" Added: "Special considerations: When changing route of administration requires BHO (e.g., IV to IM or IM to IN)" Added: "Special considerations: A change in analgesic while treating a patient requires BHO (e.g., changing from morphine to fentanyl)" Added: Note: Maximum total daily dose of acetaminophen: 4000mg in 24 hours
• Choice of pain medication management should be based on paramedic clinical judgement and patient preference • For mild to moderate pain consider acetaminophen IV • For moderate to severe consider opioid option • Due the difference in absorption rates between the various administration routes and change in opioids, the base hospital is to be involved • Take care when preparing and administering all medications to avoid dosing errors. Always use the five rights of medication administration • If there are any questions, involve the base hospital • Acetaminophen IV drip directly from the vial requires vented IV tubing; remember to open the vent • Added language "up to" under morphine so paramedic may administer up to 0.1mg /kg on standing order. • IV acetaminophen will be required inventory effective July 1, 2018 for all agencies. • In order to track and report to EMSA as LOSOP, the base hospital shall be notified of any or all doses of IV acetaminophen, including standing orders administration and post radio report doses en route to receiving facility.	
S-144 Stroke and Transient Ischemic Attack	**BLS** Changed: rig to ambulance Added**:** New section "If trained and available: Obtain blood glucose, if blood glucose <60 mg/dl treat per hypoglycemia. If patient is awake and able to swallow, give 3 oral glucose

	tabs or paste (15 g total). Patient may eat or drink, if able. If patient is unconscious, NPO
• Blood glucose added to EMT scope of practice (new in state and local scope of practice for EMTs) • Added obtain blood glucose if trained and available • Refer to S-415 Base Hospital Contact/Patient Transportation and Report Emergency Patients	
S-150 Nerve Agent Exposure	**BLS** Added: Under "If you begin to experience any signs/symptoms" added Use "SLUDGE" pneumonic) Salivation, Lacrimation, Urination, Defecation, Gastric Complications, Emesis" **ALS** Added: Under Moderate headache, weakness" "generalized fasiculations" Added: Under Severe "muscle weakness, fatigue, paralysis, bradycardia, heart blocks or tachycardias" Added: Note "or on scene just in time training by trained personnel"
Pediatric Treatment Protocols	
S-161 Altered Neurologic Function (Non-Traumatic)	**ALS** Deleted: "Versed not required for simple febrile seizures"
• Capnography is encouraged if O2 sat <97%	
S-162 Allergic Reaction/Anaphylaxis	**BLS** • Changed: From "May assist patient to self-medicate own prescribed EpiPen" to "May assist patient to self-medicate own prescribed epinephrine auto injector or MDI ONE TIME ONLY. Base Hospital contact required prior to any repeat dose." Added: If trained and available: Epinephrine auto-injector 0.15mg IM x1 **ALS** Added: "Then" added after Epinephrine 1:1000 per drug chart IM SO MR x2 q5 minutes SO Changed: From "to maintain systolic BP >70+ 2x age" to "maintain adequate perfusion" Added: "for respiratory involvement" added next to Albuterol and Atrovent Added: Next to Angioedema lip/tongue/face swelling "difficulty swallowing, throat tightness, hoarse voice" Moved: Moved to the bottom as reference "Angioedema: lip/tongue/face swelling/difficulty swallowing/throat tightness, hoarse voice" Moved: Anaphylaxis criteria moved to bottom for reference Added: Note: EMTs not yet trained in epinephrine auto-injections may assist patient to self-medicate with patient's prescribed epinephrine auto-injector
• Focus on treating patients on signs of adequate perfusion such as: capillary refill, mental status, heart rate	

when calm, skin color • "then" was added after Epinephrine dose to stress importance of giving epinephrine in anaphylaxis • Epinephrine is the drug of choice for anaphylaxis and is the drug of choice for anaphylaxis • Epinephrine added to EMT scope of practice due to statewide push to expand availability of treatment for anaphylaxis (new in state and local scope of practice for EMTs) • Refer to S-415 Base Hospital Contact/Patient Transportation and Report Emergency Patients • Angioedema moved below anaphylaxis criteria as a reference that allergic reactions can manifest as angioedema. No change to current practice.	
S-163 Dysrhythmias	**ALS** Changed: From "to maintain systolic BP >70+ 2x age" to "maintain adequate perfusion" Changed: From "Perform no more than 10 second rhythm check" to "Perform no more than 5 second rhythm check" Added and Changed: Under VF/pulseless VT Once IV/IO established, if no pulse check after rhythm/pulse check " Amiodarone per drug chart IV/IO MR x1 in 3-5 minutes SO OR o Lidocaine per drug chart IV/IO MR x1 in 3-5 minutes SO" Deleted: under VF/pulseless VT: "If unable to adequately ventilate via BVM intubate SO" Deleted: under PEA/asystole: "If unable to adequately ventilate via BVM intubate SO"
• Most children < 3 year old are difficult to get an accurate BP on. • Children can exhibit compensated shock, hypotension is often late sign and waiting until BP drops to recognize shock can be dangerous. • Focus on treating patient based on signs of adequate perfusion such as: capillary refill, mental status, heart rate when calm, skin color • VF/pulseless VT 2015 AHA guidelines recommend administration of amiodarone or lidocaine as acceptable antiarrhythmic agents for shock refractory VF/pulseless VT • Pediatric endotracheal intubation has been removed from California paramedic scope of practice	
S-166 Newborn Deliveries	**BLS** Added: "Bring mother and infant to same hospital" Changed: From "gestational age is <20 weeks" to "gestational age < 24 weeks" under Premature and/or Low Birth Weight Infants Deleted: Meconium Delivery Section **ALS** Deleted: Intubate SO
• Gestational age change to better align with Emergency Medical Dispatch protocols as recommended by International Academies of Emergency Dispatch • 2015 AHA update, no suctioning for meconium delivery, treat patients BVM if respiratory distress after drying and stimulation	
S-167 Respiratory Distress	**ALS** Added: Under Respiratory Distress with stridor at rest "Epinephrine 1:1000 per drug chart IM SO MR x 2q 5 minutes SO"

S-167 Respiratory Distress (cont)	Added: Note: < 2 years old with no prior albuterol use (bronchiolitics)consider - suctioning of nose with bulb suction prn - capnography, assessing respirations with a one minute count - provide position of comfort -O2 saturation prn pulse oximetry < 90% and/or respiratory distress (tachypnea, retractions, grunting) -BVM to assist ventilation prn for significant respiratory distress, grunting, ALOC
• Use capnography in these patients to help recognize and intervene early in ventilatory failure • Provide a position of comfort to visualize the entire chest to see retractions (trachea tugging, supraclavicular, intercostal, etc) and then cover back up to keep patient warm • Listen for signs of respiratory distress such as wheezing, stridor, grunting, and nasal flaring • Frequent reassessment is necessary to determine if interventions have alleviated signs of respiratory distress • BVM may be needed to ventilation breaths prn for significant respiratory distress, grunting, ALOC	
S-168 Shock	**ALS** Changed: Under Shock (cardiac etiology) from "to maintain systolic BP >70+ 2x age" to "maintain adequate perfusion"
• Most children < 3 year old are difficult to get an accurate BP • Children exhibit compensated shock (tachycardia with normal BP) then progress to uncompensated shock (hypotension) if unrecognized/untreated. Hypotension is often late sign of shock • Giving early fluid bolus and watching for improvements in perfusion is key • If IV fluid bolus is needed for shock/trauma, bolus should be given IV push. "Wide open" on a 22/24 gauge needle will not be effective • Focus on treating patients with signs of inadequate perfusion such as: poor capillary refill, altered mental status, tachycardic heart rate when calm, altered skin color	
S-169 Trauma	**ALS** Changed: From "to maintain systolic BP >70+ 2x age" to "maintain adequate perfusion" Changed: Language from "Identification of the Trauma Center Candidate" to "Identification of the Trauma Center Patient" to match updated title of T-460
• Children exhibit compensated shock (tachycardia with normal BP) then progress to uncompensated shock (hypotension) if unrecognized/untreated. Waiting until BP drops to recognize shock can be dangerous. • Giving early fluid bolus and watching for improvements in perfusion is key • If IV bolus is needed for shock/trauma, bolus should be given IV push. "Wide open" on a 22/24 gauge needle will not be effective. • Focus on treating patients with signs of inadequate perfusion such as: poor capillary refill, altered mental status, tachycardic heart rate when calm, altered skin color. •	
S-170 Burns	**ALS** Added: Section on Respiratory Distress with stridor Epinephrine 1:1,000 per drug chart via nebulizer SO. MRx1 SO Epinephrine 1:1,000 per drug chart IM SO. MR x2 q5 minutes SO
• Even the slightest amount of vasoconstriction results in increasing airway diameter, reducing resistance of air flow	

• Consider nebulized epinephrine for any stridor, if respiratory distress with stridor unimproved then follow with epinephrine IM	
S-172 Apparent Life Threatening Event	**BLS** Added: "If trained and available: Obtain blood glucose prn. Hypoglycemia (suspected) or patient's glucometer results, if available, read <60 mg/dL (Neonate <45 mg/dL): If patient is awake and has gag reflex, give oral glucose paste or 3 tablets (15 g). Patient may eat or drink if able. If patient is unconscious, NPO." Added: "BRUE –brief resolved unexplained event" to title of protocol Added: "BRUE –brief resolved unexplained event" under definition
• Blood glucose added to EMT scope of practice (new in state and local scope of practice for EMTs) • Added obtain blood glucose if trained and available • Refer to S-415 Base Hospital Contact/Patient Transportation and Report Emergency Patients	
S-173 Pain Management	**BLS** Changed: From "Elevation of extremity trauma when indicated" to "Elevation of injured extremity when indicated" **ALS** Added: Fentanyl opioid option "<10 kg: Fentanyl IV/IN per drug chart BHO MR per drug chart BHO. ≥10 kg: Fentanyl IV/IN per drug chart SO MR per drug chart BHO max 75mcg" Added: Acetaminophen IV for pediatrics: **<**2 years of age-IV Acetaminophen contraindicated, ≥ 2 years of age: IV Acetaminophen per drug chart SO x1 infuse over 15 minutes Added: Special Considerations section "When changing route of administration requires BHO (e.g., IV to IM or IM to IN) A change in analgesic while treating a patient requires BHO (e.g., changing from morphine to fentanyl)" Added: Note at the bottom "IV acetaminophen should be drawn from the vial using a syringe and diluted in a 50 ml normal saline bag and administered over 15 minutes using the pediatric drug chart indicated doses."
• Due the difference in absorption rates between the various administration routes and change in opioids, the base hospital is to be involved • Take care when preparing and administering all medications to avoid dosing errors. Always use the five rights of medication administration • Emergency Medical Services Authority (EMSA) has approved County of San Diego Local Optional Scope of Practice (LOSOP) application for the use of IV acetaminophen in pediatric patients at least 2 years of age and older. • IV acetaminophen will be required inventory effective July 1, 2018 for all agencies. • In order to track and report to EMSA as LOSOP, the base hospital shall be notified of any or all doses of IV acetaminophen, including standing orders administration and post radio report doses en route to receiving facility.	
S-174 GI/GU (Non-traumatic)	**ALS** Added: "Refer to Shock Protocol (S-168) if needed"

Policy Updates

S-415 Base Hospital Contact/Patient Transportation and Report Emergency Patients	Updated: EMT shall contact the base hospital: • If they have a question regarding the appropriate disposition of any patient • Administered IN naloxone and/or epinephrine by auto injector, or was indicated • An abnormal blood glucose result as defined in S-123 Altered Neurologic Function-non traumatic (adult) or S-161 Altered Neurologic Function (pediatric) or "low" Changed: Language from "Identification of the Trauma Center Candidate" to "Identification of the Trauma Center Patient" throughout to match updated title of T-460
T-460 Identification of the Trauma Center Patient	Changed: Title of Policy from "Identification of the Trauma Center Candidate" to "Identification of the Trauma Center Patient" Changed: Trauma Criteria has 4 categories: Abnormal Vital Signs/ Level of Consciousness (box #1) Anatomic Injury Criteria (box #2) Mechanism of Injury Criteria (box #3) Special patient or System Considerations (box #4) Added: New #4 Single Ambulance (air/ground) with both pediatric and an adult patient If the pediatric patient is more critical, first transport to Rady Children's and then transport the adult to Sharp Memorial. If the adult patient is more critical transport both to the adult catchment area trauma center Added: Under Destination #2 "Patients meeting criteria #1: abnormal vital signs/altered level of consciousness, and/or #2: anatomic injury, and/or #3: mechanism of injury, shall be transported to a designated trauma center as a major trauma activation" Added: Under Destination #3 "Patients meeting criteria #4: special patient or system considerations, may require transport to a designated trauma center. Contact the base hospital for determination of destination to a non-designated trauma center hospital or the appropriate trauma center"

- The County of San Diego EMS medical director's intent is to provide evidence-based criteria to determine those patients that may benefit from the services of trauma facility.
- We are not suggesting a change in current practice, but rather codifying what is current community standard.
- Should not increase transport of patients to trauma centers more than what is currently practiced
- Box 1, 2 & 3 - call a trauma base, and transport to a trauma center; hospital is required to provide a full trauma activation
- Box 4 "Special Consideration" - if the patient meets criteria in Box 4 (special considerations) call your assigned base (trauma or non) and transport to the appropriate facility per BHO. This box identifies those patients who may not require transport to a trauma center, but are a higher risk for serious complications so require prehospital assessment, judgement and discussion with the assigned base hospital for a destination decision
- Box 4 "Special Consideration"- patients would include patients are requiring transport to:
  - trauma center for trauma activations
  - trauma hospitals who do NOT require trauma activation (previously known as "trauma resource" patients)
  - transported to non-trauma centers
- BLS providers are reminded to make base hospital contact for patients meeting any T-460 criteria for medical direction

Special Events Policy	**New Policy** –For EMS personnel assigned to special events in the County of San Diego. <u>EMT</u> • Intranasal naloxone, epinephrine auto-injector and blood glucose testing may only be performed if the EMT is affiliated with a County of San Diego approved BLS/ALS provider operating within the organized EMS System and that provider is staffing the event. <u>EMT shall call a base hospital if</u> • They have a question regarding the appropriate treatment or disposition of any patient. • They administer IN naloxone and/or epinephrine by auto-injector, or was indicated. <u>Paramedics and AEMTs</u> • ALS scope of practice skills may only be performed if the paramedic or AEMT is affiliated with a County of San Diego approved ALS provider operating within the organized EMS system and that provider is staffing the event. Base hospital contract criteria(S-415) remains in effect. • Paramedics and AEMTs may deliver non-emergency patients to physician staffed special event medical facilities, unless the patient meets Base Hospital contact criteria (S-415). <u>Transport</u> • All ALS patients from a special event must be transported by the 911 response provider for the jurisdiction in which the event occurs, excluding those that require transport by air ambulance.

*All EMS providers shall be responsible to read and review each protocol and policy in its entirety.